## CALLING CALL CHANGES by John Heaton

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## INTRODUCTION

Many people view call changes as nothing more than a stepping stone to "higher things". Nothing could be further from the truth. It is possible to call sets of call changes which are very complex, requiring a lot of concentration from the ringers and the conductor, and which are very musical. This article takes you from calling the simplest call changes to calling the most complex.

## OBJECTIVES OF CALL CHANGES

The purpose of call changes is to rearrange the bells into different, musical orders. Although Rounds is very pleasant for a while it can become a bit monotonous. There are, for instance, 720 different orders of six bells so why not try some of those? In particular, certain of these orders have acquired names. Using call changes to reach these orders is ideal because you can stay there for a while before moving on. Method ringing doesn't give you this option.

Call changes are often rung with learners because they give the learner the feel of how to speed up and slow down a bell. Most conductors, however, fail to make the most of this by calling very simple sequences of call changes. Very rapid call changes, called every handstroke, can develop better bell control than can slowly call ones and they also force the learner to learn to think more quickly. This in turn develops rope sight.

## METHODS OF CALLING

There are several methods by which calls can be made. Any of these may be varied in several ways. It is impossible to describe all methods but the following selection is reasonably comprehensive. In all methods, the objective is to swap the order in which two adjacent bells ring. By adjacent is meant two bells which are ringing adjacently, not two bells whose ringers are stood next to each other. Whenever a change is made, one of the bells ends up ringing one position later and another ends up ringing one position earlier. In other words, one bell moves up and another bell moves down. There are three ways that calls are made: calling "up", calling "down" and "other methods".

## Calling Up

When calling up, the bell which is to move up is called to follow the bell which is to move down. From Rounds, the call to swap 2 and 3 would therefore be " 2 to 3 ". In other words, the second has been called to move up over the third.

The ringers need to understand that the system being used is the calling up system. From this it follows that the first bell called is the bell which moves up and the second bell called must move down to take its place. Both of the bells that change places are called and so only the called bells need to change speed. The bell that was following the second called bell will end up following the first called bell.

Some conductors, when calling a bell to move from lead to second's place will add the extra information that the second called bell must now lead. For instance, from Rounds, bells 1 and 2 would be swapped with the call "1 to 2 lead". For learners this may be helpful, but it shouldn't necessary to include this for more experience ringers and it is a good idea rapidly to get learners used to recognising for themselves when they should lead.

In the system of calling up, both of the bells that need to change speed are called. The bell which is not called but which is following the second called bell knows to follow the first called bell. Some conductors would include this information by calling (from Rounds) " 2 to 3, 4 to 2". This might be useful for a learner who has failed to interpret the call but the need to develop the ability of learners to think about what is going on suggests that this information should be withheld.

It is acceptable to make more than one call at once. Thus, at some handstroke, the call " 2 to 3,4 to 5 " is permissible. As long as all the pairs are adjacent you can call what you want.

To call the bells into Queens from Rounds the calls would be: 2 to 3,4 to 5, 2 to 5 .

## Calling Down

When calling down, the bell which is to move down is called first and the bell that it will end up following is called second. This has the curious result that the second bell called is totally unaffected by the call and the bell that must move up is not called out at all. Many people argue that this system is better than calling up because the information is more complete. Judge for yourself.

To swap bells 2 and 3 from Rounds the call would be " 3 to 1 ". This means that bell 3 , the first called bell, must speed up and follow number 1. Number 2 must work out that the bell that was following it is not the bell that it must follow. If the ringer of number 2 hadn't realised that number 3 was following it (as may be the case when the bells are mixed up) there will be a mistake.

Additional information may be given, such as (in the case where 3 to 1 is called in Rounds) " 2 to 3 ", "4 to 2". This may be useful for learners but it is best to wean them off it. Again, several calls may be given at once.

To call the bells into Queens from Rounds the calls would be: 3 to 1,5 to 2,5 to 3 .

## Other Methods

Some conductors will call out which pair of bells is to change places. Thus, from Rounds, a conductor may call " 2 and 3 " or " 2 and 3 change". There is not any implied suggestion that either
bell is being called up or down. Indeed, from Rounds, the call " 2 and 3" may be followed by " 2 and 3".

Another method is call out the order in which the two bells are to ring after the change. Thus, to swap 2 and 3 from Rounds, the call would be " 32 ". This is taken by some conductors to the extreme of calling out the whole new row "1 32456 ". This is fine on small numbers of bells, but try it on ten or twelve.

A minority of sadistic conductors will mix styles within the same piece of ringing. Thus, Queens may be arrived at from Rounds with: "2 to 3" (calling up), "5 to 2" (calling down), "5 2" (calling the order). This mixing of styles is ideal for those situation where the objective is to make as much racket as possible (i.e. never).

## WHAT TO CALL

For many situations it may be adequate to just make up some calls as you go along. Usually, it is best to have some plan in mind to ensure that the ringing has some musical quality. Most conductors would call the bells into Queens, Tittums, Whittington's or whatever their favourite rows are. The following are examples of rows which are regarded as being musical:

```
* Rounds,
* Queens: 135246 13572468 1357924680 13579E24680T
* Tittums: 142536 15263748 1627384950 172839405E6T
* Whittington's: 531246 12753468 3124975680 531246E9780T
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In addition, there are many other named changes which can be called. Any other row will also sound quite musical but many people regard as unpleasant, rows where the biggest bells strike back to front at backstroke ( 123465,12345687 , etc.). These should probably be avoided.

## The Simplest Call Changes

There is no need to learn the calls to get from one of these rows to another. All that is required is to compare the order of the bells that you want with the current order of the bells. You can work either from the front or the back. To work from the front, decide which bell must lead. If this bell is already leading then you have done it. If not, just call it down to lead, one place at a time. Next, decide which bell should ring second and call it down to second's place. Next decide which bell should ring third and call it down into third's place etc.. This method can be used to get from any row to any other row.

For example, suppose you want to go from Queens to Tittums on six. Queens is 135246 and Tittums is 142536. Starting at the front, we need to get the Treble to lead. The Treble is already leading and so nothing more need be done with it. Next we need to get the correct bell into 2 nd's place, the 4th. In Queens the 4th rings 5th. We need the calls: 2 to 4,5 to 4 and 3 to 4 . This will give us:

135246 Queens
2 to 4135426
5 to 4134526
3 to 4143526

Next we need to get the correct bell into 3 rd's place, the 2 nd, with 5 to 2 and 3 to 2 :

143526
5 to 2143256
3 to $\mathbf{2 1 4 2 3 5 6}$

Next we need to get the correct bell into 4th's place, the 5th, with 3 to 5:

## 142356

5 to 3142536

Now, we can see that we need the 3rd in 5th's place and the 6th in 6th's place but these bells are already there, so we have done it. To summarise, we took each position in turn, decided which bell is in that position in Tittums and the called that bell into that position.

## Simple Systems

It is possible to follow a variety of systems which will get the bells from one row to another. These systems can be contrived quite easily and a particularly useful one will described. This system gives an interesting way of producing Queens and Tittums.

The basis of this system is the triangle. Starting from Rounds on 6 we can regard the base of the triangle as being the swapping of each pair of bells (leaving the Treble and Tenor alone):

## 123456 swap 2 and 3, 4 and 5 <br> 132546

Working up the triangle we must next leave the two bells at each end of the row and swap the middle pair:

132546 swap 2 and 5
135246 Queens

The pattern is easier to see on 8 bells. Now the base of the triangle is made of the pairs 2 and 3,4 and 5, and 6 and 7 :

12345678 swap 2 and 3, 4 and 5, 6 and 7
13254768

Next, leave the two bells at each end where they are and swap the middle two pairs:

13254768 swap 2 and 5, 4 and 7
13527468

Now leave the three bells at each end where they are and swap the middle pair:

## 13572468 Queens

This works on any number of bells. The pattern is that the first time, leaving the one bell at each end alone, you swap as many pairs as you can. Next, leaving the two bells at each end alone you swap as many pairs as you can. Next, leaving the three bells at each end alone, you swap as many pairs as you can. You continue this until you have just swapped the single pair in the middle and this is Queens.

We can take this pattern a bit further by applying it to Queens. On 8 bells this gives the following series of changes:

13572468 leave the end bells and swap the rest 15327648 leave the end two bells and swap the rest
15236748 leave the end three bells and swap the rest 15263748 Tittums

On 8 bells, repeating the pattern starting from Queens gives us Tittums. Now, starting from Tittums and repeating the pattern gives us the next series of changes:

15263748 leave the end bells and swap the rest
12536478 leave the end two bells and swap the rest
12354678 leave the end three bells and swap the rest
12345678 Rounds

This whole set of call changes contains 18 calls and is well worth ringing. On 6 bells the same pattern first generates Queens but then it varies slightly and produces 154326. From here we get to Tittums and from there back to Rounds. This takes 12 calls. It is left as an exercise to write them out. On 10 bells this pattern gives Queens, 19584736250, 1987654320, 1864297530 and Tittums in 60 calls. On 12 bells there are 150 calls. Write them out as an exercise.

Instead of starting with the base of the triangle it is possible to start with the point. To do this you start be swapping the middle pair then the middle two pairs and then the middle three pairs and so on. As an example:

12345678 swap the middle pair
12354678 swap the middle two pairs
12536478 swap the middle three pairs
15263748 Tittums

In starting with the point of the triangle instead of the base you get the changes in reverse order. To continue this we get:

15263748 swap the middle pair
15236748 swap the middle two pairs
15327648 swap the middle three pairs
13572468 Queens

Taking this to its conclusion we get:

13572468 swap the middle pair
13527468 swap the middle two pairs
13254768 swap the middle three pairs
12345678 Rounds

## More Complex Systems

The next sections describe several complex systems that have been rung for a long time and which are quite significant pieces of ringing. For each of these it is important to learn the pattern and not all the individual calls. It is also better to call them quite rapidly otherwise you will forget where you are up to.

## THE TWENTY ALL OVER

## Call Row

123456
1-2 213456
1-3 231456
1-4 234156
1-5 234516
2-3 324516
2-4 342516
2-5 345216
2-1 345126
3-4 435126
3-5 453126
3-1 451326
3-2 451236
4-5 541236
4-1 514236
4-2 512436
4-3 512346
5-1 152346
5-2 125346
5-3 123546
5-4 123456
This should be called by calling each bell in turn from lead to 5th's place. Don't do it by learning all the calls.

## FORTY EIGHT CHANGES

## Call Row

123456
4 to 5ths 123546
5 to lead 512346

1-2 521346
5 to 5ths 213456
4 to lead 421356
1-3 423156
4 to 5ths 231546
5 to lead 523146
2-3 532146
5 to 5ths 321456
4 to lead 432156
2-1 431256
4 to 5ths 312546
5 to lead 531246
3-1 513246
5 to 5ths 132456
4 to lead 413256
3-2 412356
4 to 4ths 123456
Using bells 4 and 5 as whole hunt bells and bells 1,2 and 3 as extreme bells, alternately call the 5th and then the 4th to lead. Each time one of the whole hunt bells is leading swap either the first two or the second two extreme bells. If 5 is leading swap the first two extreme bells. If 4 is leading swap the second two. When the extreme bells are in the order $a b c$ then $a$ and $b$ are the first two, and b and c are the second two.

## St. WINNOW'S - 60 changes

## Call Row

123456
4-5 123546
1 to 5ths 235416
2-3 325416
1 to lead 132546
2-5 135246 Queens
1 to 5ths 352416
2-4 354216
1 to lead 135426
3-5 153426
1 to 5ths 534216
3-4 543216
1 to lead 154326

## 3-2 154236

1 to 5ths 542316
5-4 452316
1 to lead 145236
5-2 142536 Tittums

1 to 5ths 425316
5-3 423516
1 to lead 142356
4-2 124356
1 to 5ths 243516
4-3 234516
1 to lead 123456

The Treble is the whole hunt. Keeping bells 2, 3, 4 and 5 (half hunt bells) in mind you can keep track of the calls by remembering the following pattern:

1) Swap the last two half hunt bells
2) Hunt the Treble
3) Swap the first two half hunt bells
4) Hunt the Treble
5) Swap the middle two half hunt bells
6) Hunt the Treble

This pattern is repeated 3 times (called 4 times in all).

The last, first and middle two half hunt bells will obviously change as the calling proceeds. Look at the figures above to see how these calls work.

Hunting the Treble means calling it from front to back or from back to front depending on which end of the row at which it is started. It is shown in the diagram as ' 1 to 5 ths' or ' 1 to lead'.

## SIXTY ON THIRDS - 66 changes

Call Row
123456
4-5 123546
2-3 132546
2-5 135246 Queens (Thirds)
1 to 5ths 352416
3-5 532416
1 to lead 153246
3-2 152346
1 to 5ths 523416
3-4 524316
1 to lead 152436
5-2 125436
1 to 5ths 254316
5-4 245316
1 to lead 124536
5-3 124356
1 to 5ths 243516
2-4 423516

1 to lead 142356
2-3 143256
1 to 5ths 432516
2-5 435216
1 to lead 143526
4-3 134526
1 to 5ths 345216
4-5 354216
1 to lead 135426
4-2 135246 Queens (Thirds)
5-2 132546
3-2 123546
5-4 123456

Start by calling the bells into Queens as shown then, using the Treble as the whole hunt and using bells $3,5,2$ and 4 as half hunt bells follow these rules:

1) Hunt the Treble
2) Call bell 3 up one place
3) Hunt the Treble
4) Call bell 3 up one place
5) Hunt the Treble
6) Call bell 3 up one place

Repeat this pattern 3 times using the remaining half hunt bells in turn instead of bell 3 (call 4 times in all), then finish by calling into Rounds as shown.

Thus the first time through the calling bell no. 3 is called up each time. The second time through you call up bell no. 5 . The third time through you call up bell no. 2 , whilst the last time through you call up bell no. 4. This is the same order as these bells ring in Queens.

Hunting the Treble means calling it from front to back or from back to front depending on which end of the row from which it started. It is shown in the diagram as ' 1 to 5 ths' or ' 1 to lead'.

## DEVON EIGHT BELL COMPETITION PIECE

Call Row
12345678
Queens 13572468
1 to 7ths 35724618
3 to 7ths 57246138
5 to 7ths 72461358
7 to 7thd 24613578
2 to 7ths 46135728
4 to 7ths 61357248
6 to 7ths 13572468
Rounds 12345678

In this 8-bell peal the bells are called into Queens and then each bell 1 to 7 is called from lead to 7ths place. Queens reappears and then the bells are called back into Rounds.

## THE PLAIN CHANGES - $\mathbf{1 2 0}$ changes

## Call Row

123456
1 to 5ths 234516
2-3 324516
1 to lead 132456
2-4 134256
1 to 5ths 342516
2-5 345216
1 to lead 134526
3-4 143526
1 to 5ths 435216
5-2 432516
1 to lead 143256
3-2 142356
1 to 5ths 423516
4-2 243516
1 to lead 124356
3-5 124536
1 to 5ths 245316
2-4 425316
1 to lead 142536
2-5 145236
1 to 5ths 452316
2-3 453216
1 to lead 145326
5-4 154326
1 to 5ths 543216
3-2 542316
1 to lead 154236
4-2 152436
1 to 5ths 524316
5-2 254316
1 to lead 125436
4-3 125346
1 to 5ths 253416
2-5 523416
1 to lead 152346
2-3 153246
1 to 5ths 532416
2-4 534216
1 to lead 153426
5-3 135426
1 to 5ths 354216
4-2 352416
1 to lead 135246
5-2 132546
1 to 5ths 325416
3-2 235416
1 to lead 123546
5-4 123456

The following rules will make the calling easier to perform. The extreme bells are 3,4 and 5 . They can also be called part bells (because they are in a different place at each part end).

1) Hunt the Treble
2) If the Second is NOT in 5ths place then move it up one place and go back to 1), otherwise:
3) Move the first of the extreme bells up one place
4) Hunt the Treble
5) If the Second is NOT in 2nds place OR the Treble is NOT leading then move the Second down one place and go back to 4), otherwise:
6) Move the second of the extreme bells up one place

Repeat the calling twice (calling three times in all). This calling contains all 120 changes on five bells and takes about 10 minutes if rung without too many mishaps.

In each part the extreme bell called up in 3 ) and 6) is the same bell. Thus in part 1 it is the 3 rd, in part 2 it is the 4th and in part 3 it is the 5th.

Hunt the Treble means call the Treble from front to back or from back to front depending on where it is starting from. It is shown in the diagram as ' 1 to 5 ths' or ' 1 to lead'.

The Treble is called the 'Whole Hunt' because it follows a Plain Hunting path throughout. The Second is the 'Half Hunt' because its Plain Hunting only occurs by one step each time the Treble has moved all the way from front to back or from back to front, and it only comes home at the part ends. Bells 3, 4 and 5 'Go The Sixes' because if all the rows of the form $12 x x x 6$ are written out in the order in which they occur in the ringing then bells 3,4 and 5 perform Plain Hunt on three, which has six changes.

